AMENDMENTS TO THE SPECIFICATION

Please amend page 3, the paragraphs beginning on lines 20 and 22, to read as follows:

- - Fig. 2A illustrates the same images as Fig. 1A, wherein the deconvolution is performed with constraints obtained from near-field imaging data; [[and]]

Fig. 2B is a graphical illustration of the deconvolution of Fig. 2A; and

Fig. 3 is a diagrammatic illustration of equipment suitable for carrying out the method of the invention. --

Page. 9, between lines 17 and 18, please insert the following new paragraphs:

- - Diagrammatically illustrated at 10 in Fig. 3 is equipment suitable for carrying out the above-described methodology. A near field microscope such as a scanned probe microscope 12, includes a near field optical and/or a near field atomic force microscope, is positioned so that the same region of an object or sample 14 can be imaged by both the microscope 12 and a far-field imager 18 which is based on a lens 20, as indicated by the doted lines. The sample 14 has to be put on a stage 16 that can be accurately moved relative to the scanned probe or far-field imaging devices. Both the scanned probe data and the far-field imager's data can be integrated by a processor 22 that can be used either directly or with another processor so that the recorded data can be used for computation of the final image.

- - The near field microscope can be configured with a probe that is a near-field optical probe. This probe can be positioned at any point on the sample. One reason for incorporating such a probe would be to provide an on-line point source for determining a point spread function either with or without the sample in place. The relative

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movement of the sample and the probe allows for multiple point spread functions at different points in the sample where the sample could perturb the point spread function in different ways. The near-field optical probe in the near field microscope 12 can not only provide point spread functions but also other optical information at various points in the sample. In addition, the near-field optical probe can be configured so that the height of these or other points on the surface of the object or sample can be correlated with the far-field optical image. Furthermore, the location of the borders of the sample can also be assessed. Such height information can also be obtained by other types of probes in the near field microscope, including an atomic force probe, which can also provide information on the borders of the object or sample.

- - The processor records and integrates all the data, including the optical information, height information, information on the object or sample borders and/or accurate movement of the object or the sample relative to the near field microscope and/or the far field imager. This data, together with any other pertinent imaging information, can be incorporated into a deconvolution algorithm that can then use this data to produce a super-resolution deconvolved image.

- - As an example of the closed-loop operation of the illustrated equipment, an image is obtained with the far-field imager and the position of a particular feature is determined with the near-field microscope. The images are directed to the processor, where they go through the deconvolution algorithm, using the portion of that particular feature as a constraint. The deconvolution algorithm may provide calculated information about another feature at another position in the far-field image, and the near-field microscope is then used to measure that new feature. The measured information is

used to determine the error gradient in the position of the new calculated feature, and in closed loop fashion the algorithm is adjusted to improve the result.

- - In various embodiments of the invention, the far-field imager may include non-linear optical imaging and the image recording may include recordation of interdigitated and correlated data sets of scanned probe and far-field imaging. It is beneficial but not an absolute requirement that neither the near field microscope nor the far-field imaging device obstruct viewing of the object or sample from one or the other device. - -